

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
CENTRAL VALLEY REGION

ORDER NO. R5-2009-XXXX

INDIVIDUAL WASTE DISCHARGE REQUIREMENTS
FOR
MICHAEL VANDER DUSSEN, DBA DOUBLE DIAMOND DAIRY
MERCED COUNTY

The California Regional Water Quality Control Board, Central Valley Region, (hereafter Board) finds that:

Findings

Facility Owner & Location

1. The Double Diamond Dairy (hereafter “facility”) is owned and operated by Michael Vander Dussen (hereafter “Discharger”) and is located in Section 31, Township 9S, Range 14E, Mount Diablo Base & Meridian, at 729 E Jefferson Rd, El Nido, Merced County (see Attachment A, which is hereby made part of this Order).
2. The facility has been in operation since 17 November 1999.
3. The facility is not currently regulated under Order No. R5-2007-0035, Waste Discharge Requirements General Order for Existing Milk Cow Dairies (hereafter “General Order”) because the facility expanded since October 2005. Pursuant to Finding 2. of the General Order, the Order does not apply to such facilities.
4. Double Diamond Dairy is currently regulated under General Industrial Storm Water Permit, Water Quality Order No. 97-03-DWQ, NPDES No. CAS000001, and is identified by WDID No. 5F24101595. The Discharger has no record of noncompliance associated with the NPDES permit.

Facility Description

5. The Discharger milks 4,800 cows, and has 720 dry cows, 1,340 bred heifers, 700 heifers aged one year to breeding, 1,540 three-to-twelve month calves, and 770 baby calves for a total herd size of 9,870 Holstein animals. Baby calves are housed in hutches at the facility. The maximum herd size at the facility is 9,870 animals based on the final Environmental Impact Report. The maximum number of animals in each age category will not exceed the numbers given in this Finding.

6. The Discharger owns 2,277 acres and leases 40 acres where the facility is located for a total of 2,317 acres. Land under agricultural production at the facility consists of 2,129 acres located on Assessor's Parcel Numbers 074-140-006, 074-140-007, 074-140-010, 074-140-016, 074-140-022, 074-140-032, 074-160-006, 074-160-007, 075-710-015, 075-710-016, 075-710-017, 075-710-020, 075-740-001, 075-750-010, 085-050-007, 085-380-028. Of the cropland, 1,011 acres are cropped in alfalfa, 1078 acres are double cropped with wheat and corn silage, and 40 acres are triple cropped in sudan grass, wheat and corn silage. The Discharger applies liquid waste to 1,990 of the 2,129 acres and solid manure to all of the cropland. Manure solids are used on the cropland or for bedding. The Discharger also owns 121 acres away from the dairy facility with APNs 085-380-028 and 085-050-007, which are being leased for growing tomatoes. At this time liquid and solid manure are not applied to the field; however, it may be applied at some point in the future.
7. The remaining 188 acres are used for the dairy production area, including corrals, freestall barns, milking parlor, holding pens, manure storage and drying areas, hay and commodity storage pads, mechanical separators, settling ponds, and the storage lagoons (See Attachment B).
8. The facility is located outside the 100-year floodplain.

Waste Production

9. Waste produced at the facility consists of wastewater from facility wash down operations and storm water containing manure, urine, milk products, spoiled feed material, bedding (litter), soil, and cleaning compounds. Solid wastes are also produced at the facility and primarily consist of manure with additional fractions of spoiled feed, bedding material and soil.
10. An estimated 110,040 gallons per day (gpd) of clean water from the on-site water supply wells is used to wash down the holding pen, wash pen, and milking parlor floors, rinse the cows, and wash down miscellaneous dairy equipment. An additional 20,000 gallons per week of fresh water is used to wash down the calf holding areas. Over 120 days, the volume of barn wastewater generated from freshwater use will be 1,813,596 cubic feet. One hundred twenty days (December 1 through March 30) is the maximum amount of time that waste needs to be stored at the facility between land applications.
11. Operation of the dairy is estimated to generate 1.37 cubic feet of manure per animal unit per day, where an animal unit equals 1000 pounds of animal weight. Fifteen percent of the manure is removed as solids through the mechanical separator, leaving a total of 1,760,917 cubic feet of manure wastewater generated over 120 days for a herd of 9,870 animals.

12. Rainfall onto impervious areas of the facility, onto the ponds, and onto corrals is estimated at 3,129,195 cubic feet over the December through March storage period, using average rainfall figures and including rainfall from one 25-year, 24-hour storm.
13. The total amount of wastewater requiring storage over the 120-day maximum storage period, after removing losses due to evaporation and adding one 25-year 24-hour storm, is 6,703,708 cubic feet.

Wastewater Ponds

14. Wastewater generated at the facility is conveyed to a transfer pit and then to two mechanical separators on concrete slabs to settle out solid material from the flushing of the freestall barns. The liquid wastewater is then sent to three settling ponds, which are side by side to settle out any remaining solid material after running through the mechanical separators. Wastewater then gravity flows into the three main storage lagoons, before it is used for irrigation of the land application area. Wastewater from the process pit is used to flush the lanes.
15. The facility has three settling ponds and three storage lagoons. The three settling ponds all have dimensions of 430 feet long by 100 feet wide, are 25 feet deep and have 1:1 side slopes. The wastewater storage lagoons have dimensions of 100 feet long by 40 feet wide, 650 feet long by 160 feet wide, and 616 feet long by 300 feet wide. The lagoons are 25 feet, 35 feet, and 40 feet deep and all three have 1:1 side slopes. The storage lagoons were constructed following the 1984 Title 27 requirements of having underlying soils of no more than ten percent gravel and no less than ten percent clay. The total storage capacity of the three storage lagoons combined, allowing for two feet of freeboard, is 10,332,534 cubic feet.
16. The three storage lagoons have been constructed to handle runoff from storm events above and beyond a 25-year, 24-hour storm as long as the storage lagoons are properly managed throughout the year.

Groundwater Monitoring

17. The Discharger has installed a monitoring well system to characterize groundwater flow direction and gradient beneath the site, and characterize groundwater quality downgradient of the corrals, downgradient of the storage lagoons and upgradient of the cropland. The Discharger's neighbor, Guilherme Brasil located at 13701 S Highway 59 in El Nido, has installed a monitoring well that can act as the downgradient monitoring well for the cropland at the Double Diamond Dairy. The Discharger has provided a written agreement with Guilherme Brasil for using this well as a downgradient monitoring location. Should this agreement become cancelled for any reason, the Discharger shall install a groundwater monitoring well to monitor downgradient of the cropland, unless an alternative agreement can be provided. This new well, and any additional groundwater monitoring wells

required in the future, will be installed in accordance with Attachment D. In addition, the Discharger monitors existing domestic and agricultural production wells for changes in water quality.

18. Groundwater samples were collected at the dairy facility in September 2004, November 2005, March 2007, August 2007, and March 2008. Depth to groundwater ranged from 85 to 108 feet below ground surface over the sampling period. Groundwater flow was determined to be northeast to south west. In response to a Regional Board request, shallow irrigation and domestic water wells were sampled, along with four monitoring wells, to assess ambient water quality and nitrate impacts to the uppermost aquifer. Groundwater samples showed that, regionally, the groundwater has elevated nitrate as N and TDS levels. On average, of the monitoring wells at the facility, the upgradient wells had higher levels of nitrate as N than the downgradient wells.

Land Application Area

19. Wastewater generated at the facility is applied to land owned and/or operated by the dairy at agronomic rates as described in the certified Nutrient Management Plan that complies with Attachment C. Any manure solids applied to land application areas will be applied at agronomic rates as described in the certified Nutrient Management Plan.
20. All land application areas have tailwater recovery systems.
21. All fields, ditches, and pipelines exposed to wastewater are flushed with clean water during the last irrigation or usage of the season to remove any waste residue.

California Environmental Quality Act

22. The County of Merced Department of Planning and Community Development is the lead agency for purposes of the California Environmental Quality Act (CEQA). A Draft Environmental Impact Report (EIR) for this project was submitted to the County of Merced Department of Planning and Community Development on 12 April 2005. A Final EIR was submitted to the County of Merced Department of Planning and Community Development in December 2005. The County of Merced Department of Planning and Community Development certified the Final EIR and approved the Administrative Permit # AA04-008 on 22 February 2006. The Board is a responsible agency for purposes of CEQA. The Board reviewed and considered the environmental effects of the project identified in the EIR. The EIR identified mitigation measures to lessen or avoid significant effects on the environment. This Order incorporates mitigation measures identified in the EIR that are within

the Board's jurisdiction, specifically Specifications B.9 and B.10. This Order includes requirements to assure compliance with the Porter-Cologne Water Quality Control Act and the applicable Basin Plan. This Order prohibits discharges of waste to surface water and prevents degradation of groundwater.

General Findings

23. This Order regulates the storage, management, and disposal of wastes on the dairy production area and land application area to protect the beneficial uses of underlying ground water and the surface waters that receive discharges from the facility.
24. For the purposes of this Order, "waste" includes, but is not limited to, manure, leachate, wastewater and any water, precipitation or rainfall runoff that contacts raw materials, products, or byproducts such as manure, compost piles, feed, silage, milk, or bedding. Wastewater is defined as water directly or indirectly used in operation of a milk cow dairy for any or all of the following; washing, cleaning, or flushing pens, barns, manure pits, or other dairy facilities; washing or spray cooling of animals; or dust control and includes any water or precipitation and precipitation runoff which comes into contact with any raw materials, products, or byproducts including, feed, milk, or bedding. Storm water is defined as storm water runoff, surface runoff, and drainage.
25. State Water Resources Control Board Resolution 68-16 ("Statement of Policy with Respect to Maintaining High Quality of Waters in California") (Resolution 68-16) requires that the Board maintain the high quality of waters of the State unless it has been demonstrated that any change will be consistent with maximum benefit to the people of the State, will not unreasonably affect present and anticipated beneficial uses of such water, and will not result in water quality less than that prescribed in the policies. Any activity which produces or may produce waste must be required to meet waste discharge requirements which will result in the best practicable treatment or control (BPTC) of the discharge necessary to assure that a pollution or nuisance will not occur and that the highest water quality consistent with maximum benefit to the people of the State will be maintained. This Order is consistent with Resolution 68-16. It does not authorize degradation of waters of the State. It prohibits the discharge of waste to surface waters from the production area; it prohibits the discharge of waste to surface waters from the land application area; and it prohibits degradation of surface and groundwater. This Order requires the Discharger to meet requirements that constitute best practicable treatment or control. Groundwater monitoring will be conducted at the facility. This Order requires the Discharger to meet waste discharge and land application specifications, monitoring and reporting requirements, and other provisions.

26. This Order does not authorize violation of any federal, state, or local law or regulation. The requirements prescribed herein do not authorize the commission of any act causing injury to the property of another, nor protect the Discharger from his liabilities under federal, state, or local law.
27. As stated in California Water Code Section 13263(g), the discharge of waste into waters of the State is a privilege, not a right, and this Order does not create a vested right to continue the discharge of waste. Failure to prevent conditions that create or threaten to create pollution or nuisance will be sufficient reason to modify, revoke, or enforce this Order, as well as prohibit further discharge.
28. If not controlled or retained, surface water drainage from the area flows to the Chowchilla River, and then into the East Side Bypass. The East Side Bypass is tributary to the San Joaquin River. Beneficial uses of the San Joaquin River are: municipal, industrial supply, agricultural supply, recreation, fresh water habitat, fish migration, fish spawning, and wildlife habitat.
29. Beneficial uses of groundwater in the surrounding area are domestic, municipal, industrial, and agricultural supply.
30. The Board adopted a Water Quality Control Plan for the Sacramento and San Joaquin River Basins (4th Ed. Revised October 2007) (Basin Plan) that designates beneficial uses, establishes water quality objectives, and contains implementation programs and policies to achieve those objectives for all waters addressed through the Plan. These requirements are consistent with the Plan.
31. These requirements are consistent with Title 27, Division 2, Chapter 7, Subchapter 2, California Code of Regulations, regulating confined animal facilities.
32. On **2 June 2008**, the Board notified the discharger and interested parties of its intent to issue Waste Discharge Requirements for this discharge and has provided them with a copy of the proposed Order and an opportunity to submit written comments. Comments were received and responses were posted to the Regional Board website on **13 January 2009**.
33. After considering all comments pertaining to this Order during a public hearing on **XX February 2009** this Order was found consistent with the above findings.

IT IS HEREBY ORDERED that Michael Vander Dussen, dba Double Diamond Dairy, its owners, tenants, agents, successors, and assigns, pursuant to California Water Code Sections 13260, 13263, and 13267 and in order to meet the provisions contained in Division 7 of the California Water Code and regulations and policies adopted thereunder shall comply with the following;

A. Prohibitions

1. The discharge of waste other than as defined in Finding 21 above or from septic tanks, or of hazardous waste, as defined in the California Water Code Section 13173 and Title 23 CCR Section 2521 (a), respectively, is prohibited. The disposal of waste not generated by on-site animal production activities as defined in Finding 9, above, is prohibited unless a Report of Waste Discharge for the disposal has been submitted to the Executive Officer and the Central Valley Water Board has issued or waived waste discharge requirements (WDRs).
2. The direct or indirect discharge of waste and/or storm water from the production area to surface waters is prohibited.
3. The discharge of wastewater to surface waters from a land application area is prohibited. Irrigation supply water that comes into contact or is blended with waste or wastewater shall be considered wastewater under this Prohibition.
4. The discharge of storm water to surface water from a land application area where manure or wastewater has been applied is prohibited unless the land application area has been managed consistent with a certified Nutrient Management Plan.
5. The disposal of waste not generated by on-site animal production activities is prohibited except where a Report of Waste Discharge for the disposal has been submitted to the Executive Officer and the Central Valley Water Board has issued or waived waste discharge requirements (WDRs).
6. The application of wastewater to a land application area before, during, or after a storm event that would result in runoff of the applied water is prohibited.
7. The discharge of waste from the facility to surface waters which causes or contributes to an exceedance of any applicable water quality objective in the Basin Plan or any applicable state or federal water quality criteria, or a violation of any applicable state or federal policies or regulations is prohibited.
8. The collection, treatment, storage, discharge or disposal of waste from the facility that results in pollution or nuisance is prohibited.
9. The disposal of dead animals in any liquid manure or wastewater system is prohibited. The disposal of dead animals at the facility is prohibited except when federal, state or local officials declare a State of Emergency and where all other options for disposal have been pursued and failed and the onsite disposal complies with all state and local policies for disposal of dead animals.

10. All animals shall be prohibited from entering any surface water within the animal confinement area (Title 27 CCR Section 22561).
11. The application of waste to lands not owned, leased, or controlled by the Discharger without written permission from the landowner or in a manner not approved by the Executive Officer, is prohibited.
12. The land application of manure or wastewater to land application areas for other than nutrient recycling is prohibited.
13. The use of manure to construct containment structures or to repair, replace, improve, or raise existing containment structures is prohibited.
14. The direct discharge of wastewater into groundwater via backflow through water supply or irrigation supply wells is prohibited.

B. Specifications

Waste Discharge Specifications

1. The collection, treatment, storage, discharge, or disposal of wastes at the facility shall not result in: (1) discharge of waste constituents in a manner which could cause degradation of surface water or groundwater, (2) contamination or pollution of surface water or groundwater, (3) a condition of nuisance, (4) exceedance of water quality objectives, or (5) unreasonably affect beneficial uses (as defined by the California Water Code Section 13050).
2. The storage lagoons and the settling ponds at the facility shall be operated and maintained to be protective of water quality. If at any time the design, construction, operation, and/or maintenance of the lagoons and/or ponds is not protective of water quality, the Discharger shall notify the Board and propose modifications in accordance with Required Reports and Notices F.1.b.
3. Prior to the enlargement of any of the existing storage lagoons or settling ponds; construction of any new lagoon or settling pond; or in the event that the design, construction, operation and/or maintenance of the lagoons and/or ponds is not protective of water quality the Discharger shall submit a design for review and approval by the Executive Officer. The design shall conform to either of the options described below:
 - i. Tier 1: A pond designed to consist of a double liner constructed with 60-mil high density polyethylene or material of equivalent durability with a leachate collection and removal system

(constructed in accordance with Section 20340 of Title 27) between the two liners will be considered to be consistent with Resolution 68-16. Review for ponds designed to this standard will be conducted in less than 30 days of receipt of a complete design plan package submitted to the Board.

- b. Tier 2: A pond designed in accordance with California Natural Resource Conservation Service (NRCS) Conservation Practice Standard 313 or equivalent and which the Discharger must demonstrate through submittal of technical reports that the alternative design is protective of groundwater quality as required in Specification B.4 below.
4. Prior to commencement of construction described in Specification B.3, Discharger shall submit a design report for review and approval by the Executive Officer prepared by, or under the direct supervision of, and certified by, a Civil Engineer who is registered pursuant to California law or other person as may be permitted under the provisions of the California Business and Professions Code to assume responsible charge of such work. The design report shall include the following:
 - a. Design calculations demonstrating that adequate containment will be achieved.
 - b. Details on the liner and leachate collection and removal system (if appropriate) materials,
 - c. A schedule for construction and certification of completion,
 - d. A construction quality assurance plan describing testing and observations needed to document construction of the pond in accordance with the design and Sections 20323 and 20324 of Title 27,
 - e. An operations and maintenance plan for the pond, and
 - f. Unless waived by the Executive Officer, a technical report and groundwater model that demonstrates the proposed pond is in compliance with the groundwater limitations in this Order, including calculations that demonstrate the amount and quality of seepage from the proposed pond and its effect on water quality.
5. Prior to the placement of waste in any enlarged existing settling, storage, or retention pond or any such newly constructed pond, the Discharger shall submit a post construction report prepared by, or under the direct supervision of, and certified by, a Civil Engineer who is registered pursuant to California

law or other person as may be permitted under the provisions of the California Business and Professions Code to assume responsible charge of such work. Waste shall not be placed into the pond until the Executive Officer notifies the Discharger in writing that the post construction report is acceptable. The post construction report shall include: (1) verification that the pond meets the requirements of this Order including documentation of the results of the construction quality assurance testing and observations, (2) certification that the pond was constructed as designed and (3) as-built diagrams.

6. The facility shall have lagoons and conveyance structures that are designed, constructed, operated, and maintained to retain all facility wastewater generated during the storage period (maximum period of time anticipated between land application of wastewater), together with all precipitation on and drainage through manured areas, up to and including during a 25-year, 24-hour storm.
7. The level of waste in the settling ponds and storage lagoons at the facility shall be kept a minimum of two (2) feet from the top of each pond. Less freeboard may be approved by the Executive Officer when a Civil Engineer who is registered pursuant to California law, or other person as may be permitted under the provisions of the California Business and Professions Code to assume responsible charge of such work, demonstrates that the structural integrity of the pond will be maintained with the proposed freeboard.
8. Settling ponds and the storage lagoons at the facility shall be managed and maintained to prevent breeding of mosquitoes and other vectors. In particular,
 - a. Small coves and irregularities shall not be allowed around the perimeter of the water surface;
 - b. Weeds shall be minimized through control of water depth, harvesting, or other appropriate method;
 - c. Dead algae, vegetation, and debris shall not accumulate on the water surface; and
 - d. Management shall be in accordance with the requirements of the Mosquito Abatement District.
9. A routine sanitation and manure management plan shall be prepared for the dairy. The Discharger shall inspect for manure buildup weekly in the freestall barn pens. Manure removal and scraping of wet manure in the flush lane along the freestall barn pens should be conducted weekly to minimize fly production when manure buildup is evident.

10. Manure buildup underneath watering stations shall be removed and incorporated back into the pen or placed into flush lanes each week throughout the year.
11. All precipitation and surface drainage from outside of the facility (i.e., "run on") shall be diverted away from any manured areas unless such drainage is fully contained (Title 27 Section 22562(b)).
12. Ponds and lagoons designated to contain the 25-year, 24-hour storm event runoff must have a depth marker that clearly indicates the minimum capacity necessary to contain the runoff and direct precipitation from a 25-year, 24-hour storm event.
13. All roofs, buildings, and non-manured areas located in the production area at the facility shall be constructed or otherwise designed so that clean rainwater, including roof drainage, is diverted away from manured areas, including corrals and waste containment facilities, unless such drainage is fully contained in the wastewater retention system (Title 27 Section 22562(b)).
14. The milk parlor, animal confinement area (including corrals), and manure and feed storage areas shall be designed and maintained to convey all water that has contacted animal wastes or feed to the wastewater retention system and to minimize standing water and the infiltration of water into the underlying soils. The Discharger shall, at a minimum of once per year, backfill any slope loss with compacted, non-manured material to maintain pre-existing slopes.
15. Unlined ditches, swales, and/or earthen-berm channels may not be used for storage of wastewater, manure, or tailwater and may only be used for conveyance of wastewater collected in the production area to the settling ponds or storage lagoons, conveyance of wastewater from the storage lagoons to the land application area, irrigation return water management, or temporary control of accidental spills.

Land Application Specifications

16. Land application of all waste from the facility shall be initially conducted in accordance with the whole farm Nutrient Management Plan submitted as part of the 2005 Environmental Impact Report. No later than **27 February 2009**, the Discharger shall submit and follow a certified Nutrient Management Plan that meets the requirements in Attachment C. A Nutrient Management Plan that meets the requirements in Attachment C is consistent with Resolution No. 68-16. Land application of wastes at the facility shall not pollute underlying groundwater or cause the underlying groundwater to contain any waste constituent, degradation product, or any constituent of soil mobilized by the interactions between applied waste and soil or soil biota, to exceed the groundwater prohibitions and specifications set forth in this Order. The

Nutrient Management Plan shall be modified within 90 days if monitoring shows that discharge from the land application is polluting ground water or fails to comply with surface water quality objectives or criteria. The modifications must be designed to bring the facility into compliance with this Order.

17. The Discharger shall have a written agreement with each third party that receives wastewater from the Discharger for its own use. Each written agreement shall be included in the Discharger's Nutrient Management Plan and Annual Report. The written agreement(s) shall be effective until the third party is covered under waste discharge requirements or a waiver of waste discharge requirements that are adopted by the Central Valley Water Board and that are specific to the application of the Discharger's wastewater to land under the third party's control. The written agreement shall:
 - a. Clearly identify:
 - i. The Discharger and dairy facility from which the wastewater originates,
 - ii. The third party that will control the application of the wastewater to land application areas,
 - iii. The Assessor's Parcel Number(s) and the acreage(s) of the land application areas where the wastewater will be applied, and
 - iv. The types of crops to be fertilized with the wastewater.
 - b. Include an agreement by the third party to:
 - i. Use the wastewater at agronomic rates appropriate for the crops to be grown, and
 - ii. Prevent the runoff to surface waters of wastewater, storm water or irrigation supply water that is blended with wastewater.
 - c. Include a certification statement, as specified in General Reporting Requirements in C.7 of the Standard Provision and Reporting Requirements (which is attached to and made part of this Order), which is signed by both the Discharger and third party.
18. The Discharger will continue to conduct metering to determine application rates from the storage ponds to the cropland.
19. The application of waste to land application areas shall be at rates that preclude development of vectors or other nuisance conditions and meet the

conditions of the certified Nutrient Management Plan. Application shall be timed to minimize nitrogen movement below the root zone.

20. Land application areas that receive dry manure shall be managed through implementation of erosion control measures to minimize erosion and must be consistent with a certified Nutrient Management Plan.
21. All wastewater applied to land application areas must infiltrate completely within 72 hours after application.
22. Wastewater shall not be applied to land application areas during periods when the soil is at or above field moisture capacity unless consistent with a certified Nutrient Management Plan.
23. Manure and wastewater shall not be applied closer than 100 feet to any down gradient surface waters, open tile line intake structures, sinkholes, or other conduits to surface waters, unless a 35-foot wide vegetated buffer or physical barrier is substituted for the 100-foot setback or alternative conservation practices or field-specific conditions will provide pollutant reductions equivalent or better than the reductions achieved by the 100-foot setback. Because some of the domestic and agricultural wells at the facility are currently within 100 feet of locations where manure and/or wastewater is land applied, the Discharger will evaluate each of the wells to determine what type of preventative measures are necessary for each well to avoid contamination from manure and/or wastewater. The results of this evaluation shall be included as part of the Nutrient Management Plan, which is due no later than 27 February 2009.
24. Animal waste (manure solids) shall not be applied for disposal to any land that is not being used to grow crops. Crops must be planted within 60 days of waste application.
25. Waste and land application areas shall be managed to prevent contamination of crops grown for human consumption. The term "crops grown for human consumption" refers only to crops that will not undergo subsequent processing which adequately removes potential microbial danger to consumers.

C. Interim Groundwater Limitations

1. Interim limitations have been developed based on the concentration of the relevant constituents in the monitoring well located at the upgradient edge of the facility, MW-1. These interim groundwater limitations are to be applied at the shallowest groundwater beneath the facility. Interim limitations may not reflect the appropriate final groundwater limitations for this site. Final

limitations will be established following completion of work required by this Order.

Release of waste constituents from any treatment, storage, or disposal component associated with the facility shall not cause or contribute to groundwater:

- a. Containing constituent concentrations in excess of the concentrations specified below or background quality (as determined at MW-1 and updated as appropriate as a result of ongoing monitoring):
 - ii. Nitrate as nitrogen of 26 mg/L (background);
 - iii. Chloride of 250 mg/L (Title 22 CCR Secondary MCL);
 - iv. Total Dissolved Solids of 790 mg/L (background)
 - v. Electrical Conductivity of 1209 umhos/cm (background);
 - b. Containing taste or odor-producing constituents, toxic substances, or any other constituents, in concentrations that cause nuisance or adversely affect beneficial uses.
2. Final groundwater limitations will be developed based upon the results of the BPTC Technical Evaluation conducted as directed by section F.1.d of this Order and reported consistent with the Provisions below.

D. Provisions

1. The Discharger shall comply with the *Standard Provisions and Reporting Requirements for Individual Waste Discharge Requirements for Dairies in the Sacramento and San Joaquin River Basins* (Standard Provisions) dated **August 2007**, which is attached to and made part of this Order.
2. The Discharger shall comply with all applicable provisions of the California Water Code, Title 27 CCR, and the applicable Water Quality Control Plans.
3. The Discharger shall comply with the attached Monitoring and Reporting Program No. R5-2009-XXXX which is part of this Order, and future revisions thereto as specified by the Board or the Executive Officer.
4. The number of animals shall not be increased above the maximum herd size stated in Finding 5 until the Discharger submits a new Report of Waste Discharge (ROWD) and the Regional Board has issued new Waste Discharge Requirements. The ROWD shall clearly demonstrate that the increase in animals will not constitute a threat to water quality.
5. The Discharger shall submit a complete Report of Waste Discharge in accordance with the California Water Code Section 13260 at least 140 days prior to any material change or proposed change in the character, location, or

volume of the discharge, including any expansion of the facility or development of any treatment technology, or construction of an anaerobic digester.

6. In the event of any change in control or ownership of land or waste discharge facilities presently owned or controlled by the Discharger, the Discharger shall notify the succeeding owner or operator of the existence of this Order by letter, a copy of which shall be forwarded to the Board.
7. The Board will review this Order periodically and may revise requirements when necessary.
8. If site conditions threaten to violate Specification B.1 or Prohibition A.2, the Discharger shall take immediate action to preclude the violation, documenting the condition and all corrective actions. Such actions shall be summarized in the annual monitoring report. Alterations of the Waste Management Plan (see Required Reports and Notices F1.b) for the production area to avoid a recurrence shall be submitted as a modification to the Waste Management Plan.
9. If a discharge of waste creates, or threatens to create, significant objectionable odors or nuisance odor and vector conditions, enforcement and/or revocation of coverage under this Order may result.
10. The Discharger shall comply with all requirements of this Order and all terms, conditions, and limitations specified by the Executive Officer.
11. Any instance of noncompliance with this Order constitutes a violation of the California Water Code and its regulations. Such noncompliance is grounds for enforcement action, and/or termination of the authorization to discharge.
12. The Discharger must maintain coverage under this Order or a subsequent revision to this Order until all manure, wastewater, and animal waste impacted soil, including soil within the retention pond(s), is disposed of or utilized in a manner which does not pose a threat to surface water or groundwater quality or create a condition of nuisance. At least 90 days before seeking to terminate coverage under this Order, the Discharger must submit to the Executive Officer a closure plan that ensures protection of surface water and groundwater. No more than 30 days after completion of site closure, the Discharger shall submit a closure report which documents that all closure activities were completed as proposed and approved in the closure plan. Coverage under this Order will not be terminated until cleanup is complete.
13. This Order shall become effective upon adoption by the Board.

14. The Discharger must comply with all conditions of this Order, including timely submittal of technical and monitoring reports as directed by the Executive Officer. Accordingly, the Discharger shall submit to the Board on or before each report due date the specified document or, if an action is specified, a written report detailing evidence of compliance with the task. If noncompliance is being reported, the reasons for such noncompliance shall be stated, plus an estimate of the date when the Discharger will be in compliance. The Discharger shall notify the Central Valley Water Board by letter when it returns to compliance with the time schedule. Violations may result in enforcement action, including Board or court orders requiring corrective action or imposing civil monetary liability.
15. Technical reports required by this Order must be certified by an appropriately licensed professional as required in this Order and its Attachments. If the Executive Officer provides comments on any technical report, the Discharger will be required to address those comments.
16. The Discharger shall maintain a copy of this Order at the site so as to be available at all times to site-operating personnel. The Discharger, landowner and his/her designee shall be familiar with the content of this Order.

E. Permit Reopening, Revision, Revocation, and Re-Issuance

1. If more stringent applicable water quality standards are adopted in the Basin Plan, the Board may revise and modify this Order in accordance with such standards.
2. This Order may be reopened to address any changes in state plans, policies, or regulations that would affect the water quality requirements for the discharges and as authorized by state law.

F. Required Reports and Notices

- I. Discharger must prepare and submit the following pursuant to Water Code Section 13267 in accordance with this Order:
 - a. The Discharger shall submit Annual Reports, Groundwater Reports, and Storm Water Reports as described in the Monitoring and Reporting Program.
 - b. **Waste Management Plan:** By **27 February 2009**, the Discharger will provide a Waste Management Plan which includes the data outlined in Attachment B to Waste Discharge Requirements General Order for Existing Milk Cow Dairies Order No. R5-2007-0035. If, in the course of operation the Discharger or the Board determines that the design, construction, operation, and/or maintenance of the dairy facility is not

- protective of water quality, the Discharger must notify the Board and propose modifications and a schedule for modifications that will bring the dairy facility into compliance. Certification that the modifications have been implemented shall be submitted to the Executive Officer within 30 days of completion of the modifications.
- c. **Nutrient Management Plan:** The Discharger has submitted a Whole Farm Nutrient Management Plan that addresses the application of wastewater to land for nutrient recycling (See Attachment C). By **27 February 2009**, the Discharger will provide a field-by-field Nutrient Management Plan to the Regional Board. The Plan must be maintained at the dairy, submitted to the Executive Officer upon request and must provide for protection of both surface water and groundwater. The Nutrient Management Plan shall be updated as necessary or if the Executive Officer requests that additional information be included. Groundwater monitoring will be used to determine if implementation of the Nutrient Management Plan is protective of groundwater quality.
 - d. **BPTC Technical Evaluation:** The Discharger shall conduct a technical evaluation that includes groundwater monitoring and a statistical analysis of collected data to determine if the lagoons and ponds are impacting groundwater. An impact is defined as a measurably significant increase in certain constituents in the groundwater over time. The technical evaluation shall involve quarterly monitoring of the four groundwater monitoring wells at the facility for a 2-year period. Monitoring will include, at a minimum, the constituents defined in Section C.1.a. of this Order. At the end of the 2-year period, an intra-well statistical analysis (an evaluation of the change in each constituent in a single well over time) will be conducted on the collected data. The statistical analysis will be due within six months from the date the last sample is collected. Should the results of the Technical Evaluation determine that there is a measurably significant impact to the groundwater, the Discharger shall develop a Best Practicable Treatment and Control (BPTC) work plan for the wastewater lagoons and settling ponds.
 - e. **BPTC Work Plan:** Within six months of the completion of the BPTC Technical Evaluation, the Discharger shall submit a written work plan for a BPTC approach for the wastewater lagoons and/or ponds. The BPTC work plan shall be reviewed and approved by Regional Board staff prior to the Discharger implementing any changes to the lagoons and/or ponds. The BPTC work plan shall contain a time schedule for completing any changes to the lagoons and/or ponds to meet BPTC. The BPTC work plan is only required if the outcome of the Technical Evaluation indicates a measurably significant impact to groundwater.

- f. **Salinity Report:** The Discharger shall submit a report that identifies sources of salt in waste generated at the dairy, evaluates measures that can be taken to minimize salt in the dairy waste, and includes a commitment to implement measures identified to minimize salt in the dairy waste. If a third party (for example, the California Dairy Quality Assurance Program) produces an industry-wide report that is acceptable to the Executive Officer, the Discharger may refer to that report rather than generating his own report, but must certify that the appropriate measures will be implemented to reduce salt in his dairy waste.

G. Reporting Provisions

1. All annual reports or information submitted to the Board shall be signed and certified in accordance with C.7 and C.8 of the Standard Provisions.
2. The Discharger shall submit all reports as specified in the attached Monitoring and Reporting Program No. R5-2009-XXXX.
3. The Discharger shall furnish, within a reasonable time, any information the Board may request, to determine whether cause exists for modifying, revoking, and reissuing, or terminating this Order. The Discharger shall, upon request, also furnish to the Board copies of records required to be kept by this Order.
4. All reports prepared and submitted to the Executive Officer in accordance with the terms of this Order shall be available for public inspection at the offices of the Board.

H. Record Keeping

The Discharger shall create, maintain for five years, and make available to the Board upon request by the Executive Officer any reports or records required by this Order including those required under Monitoring and Reporting Program No. R5-2009-XXXX.

I, PAMELA C. CREEDON, Executive Officer, do hereby certify the foregoing is a full, true, and correct copy of an Order adopted by the California Regional Water Quality Control Board, Central Valley Region, on XX February 2009.

PAMELA C. CREEDON, Executive Officer